

CLAIMS:

1 1. A method for making a frame for a screen assembly for a
2 vibratory separator the method comprising
3 making a frame support for a screen assembly for a
4 vibratory separator with robotic welding apparatus,
5 moving the frame support to cleaning apparatus,
6 cleaning the frame support with the cleaning
7 apparatus,
8 moving with mechanical movement apparatus the frame
9 support to heating apparatus,
10 heating the frame support with the heating
11 apparatus,
12 moving the heated frame support to coating apparatus
13 with mechanical movement apparatus,
14 coating the frame support in the coating apparatus
15 with protective material, and
16 allowing the coated frame support to cool so that
17 the protective material sets.

1 2. The method of claim 1 wherein the protective material is
2 epoxy.

1 3. The method of claim 1 wherein the cleaning apparatus is
2 sand blasting apparatus or liquid cleaning apparatus.

1 4. The method of claim 1 wherein the frame support is made
2 of tubular members.

1 5. The method of claim 1 further comprising
2 emplacing a grid adjacent the frame support.

1 6. The method of claim 5 further comprising
2 connecting the grid to the frame support.

1 7. The method of claim 5 further comprising
2 producing the grid by punching a piece of material
3 with robotic punching apparatus.

1 8. The method of claim 1 wherein automated movement
2 apparatus moves the frame support from step to step.

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1 9. The method of claim 7 wherein automated movement
2 apparatus moves the grid to the cleaning apparatus.

1 10. The method of claim 1 further comprising
2 connecting a secondary support to the frame support.

1 11. The method of claim 10 wherein the secondary support is
2 from the group consisting of perforated plate and strip support.

1 12. A method for making a screen assembly for a vibratory
2 separator the method comprising

3 making a frame support for a screen assembly for a
4 vibratory separator,

5 moving with mechanical movement apparatus the frame
6 support to cleaning apparatus,

7 cleaning the frame support with the cleaning
8 apparatus,

9 moving with mechanical movement apparatus the frame
10 support to heating apparatus,

11 heating the frame support with the heating
12 apparatus,

13 moving the heated frame support to coating apparatus
14 with the mechanical movement apparatus,

15 coating the frame support in the coating apparatus
16 with protective material,

17 moving the frame support away from the coating
18 apparatus with the mechanical movement apparatus,

19 allowing the coated frame support to cool so that
20 the protective material sets, and

21 combining screening material with the frame support.

1 13. The method of claim 12 wherein the screening material
2 comprises a plurality of layers of screening material.

1 14. The method of claim 13 wherein the layers of the
2 plurality of layers of screening material are connected together.

2 15. The method of claim 14 wherein the layers are connected
3 together by a method from the group consisting of bonding, sewing,
4 gluing, and adhering.

1 16. The method of claim 12 wherein the screening material is
2 combined with the frame support by a method from the group
3 consisting of fastening, welding, gluing, adhering, and bonding.

1 17. The method of claim 12 further comprising connecting a
2 grid to the frame support.

1 18. The method of claim 17 wherein the grid is from the group
2 consisting of coarse mesh layer, perforated plate, and strip
3 support.

1 19. The method of claim 17 wherein the screening material
2 comprises a first layer of screening material and a second layer of
3 screening material, the method further comprising

4 placing the first layer of screening material below
5 a glue application apparatus for applying heated initially
6 flowable hot melt glue, the first layer of screening material
7 made of metal, and comprising a first metal mesh through which
8 liquid in the fluid is passable and having a first metal mesh
9 pattern,

10 applying with the glue apparatus an amount of heated
11 hot melt glue in a pattern to the top surface of the first
12 layer of screening material,

13 positioning a second layer of screening material
14 adjacent and in contact with the first layer to which glue has
15 been applied gluing together the first layer and the second
16 layer, the second layer of screening material made of metal
17 and comprising a second metal mesh through which liquid in the
18 fluid is passable, and

19 wherein the pattern of applied glue is different
20 from the first metal mesh pattern.

1 20. A screen assembly made by the method of claim 12.

1 21. A frame support made by the method of claim 1.

1 22. A vibratory separator comprising
2 screen assembly holding apparatus,
3 vibrating apparatus for imparting vibration to the
4 screen assembly apparatus, and
5 the screen assembly apparatus made by the method of
6 claim 12.

1 23. A method for treating fluid with a vibratory separator,
2 the method comprising
3 introducing the fluid to the vibratory separator,
4 the vibratory separator comprising screen assembly holding
5 apparatus, vibrating apparatus for imparting vibration to the
6 screen assembly apparatus, and the screen assembly apparatus
7 made by the method of claim 12, and
8 processing the fluid with the vibratory separator.